

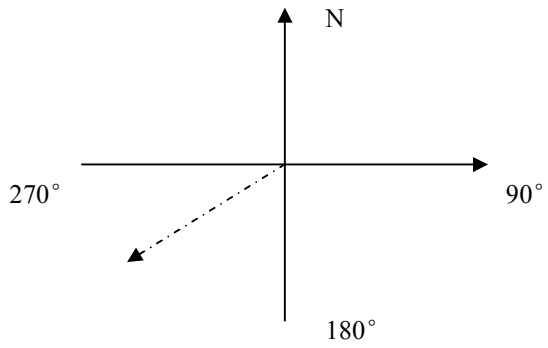
# **Installation, Configuration and Calibration Guide For Satellite Communication DCS**

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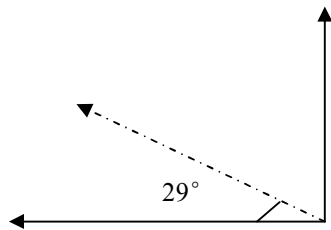
**July, 2007**

## For Antenna Installation:

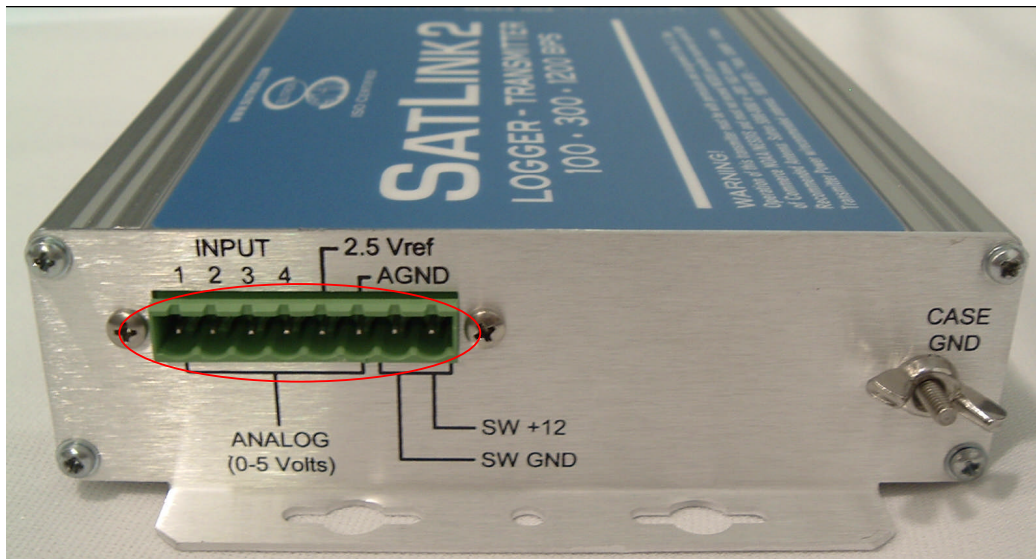
Dish Azimuth =  $230^\circ$



Dish Elevation =  $29^\circ$



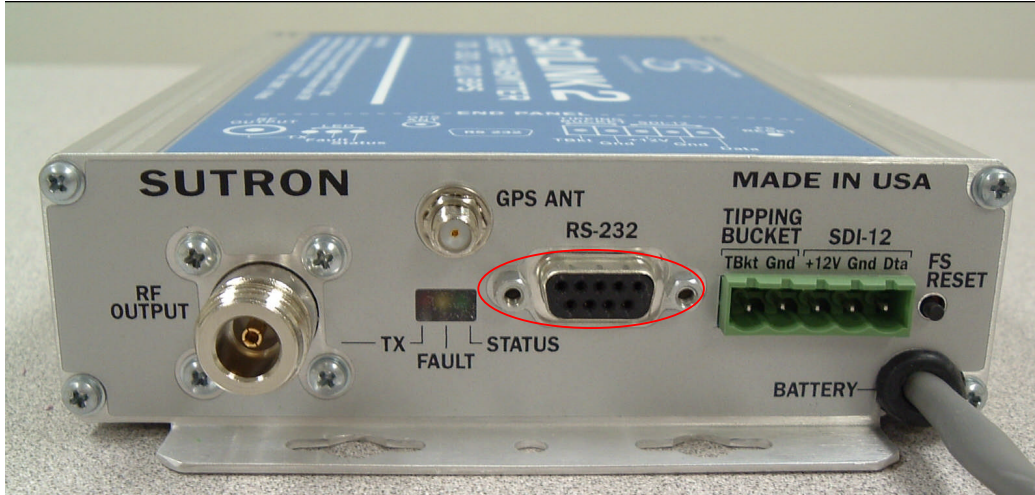
## For Connection Between Satlink and Transducer (Keller Acculevel):



Pin on Satlink	Wire from Transducer
SW +12	VCC or Power
AGND	GND
Any one from INPUT1-4	Analog OUTPUT (0-5V)

- Do not connect SW GND to Transducer's GND
- Do not connect 2.5 Vref to Transducer's VCC or Power

## For Configuring the Satlink2:

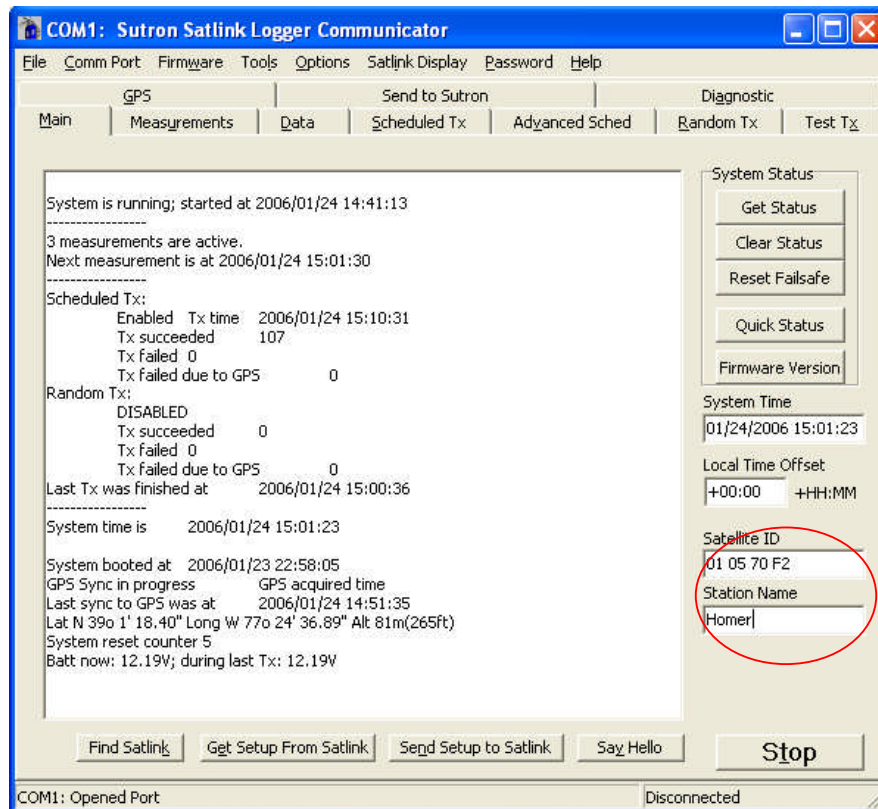


- 1) Connect one end of DB-9 serial cable to RS-232 connector on Satlink2 and connect the other end to your laptop.
- 2) Open the Satlink Communication program on you laptop to configure the Satlink2.

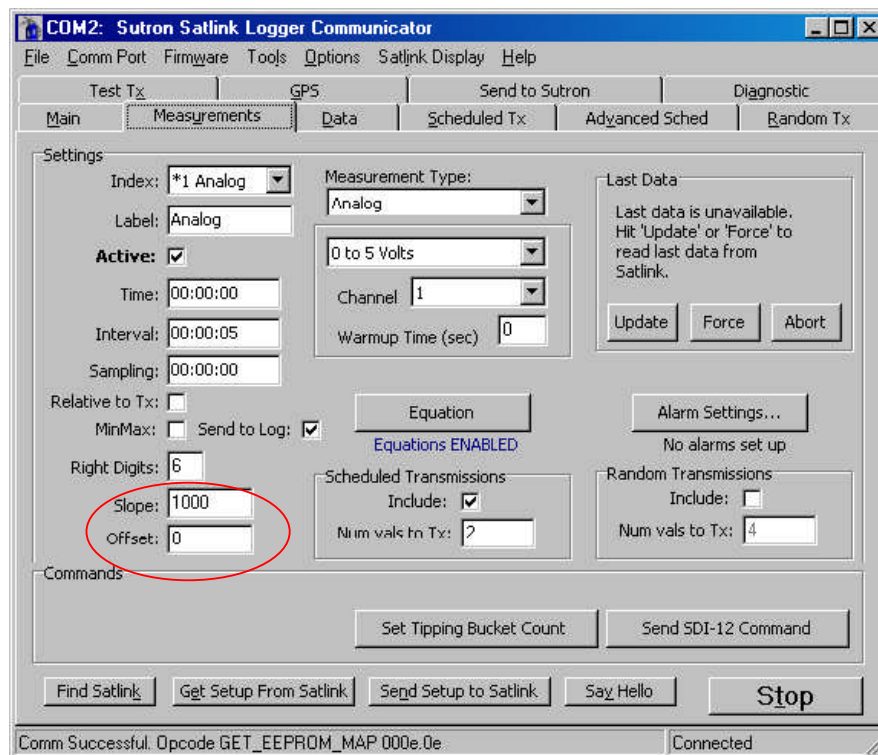


- 3) Open the existing configuration file (\*.sls) from you laptop through the file->open.
- 4) Update "Satellite ID" in "Main" frame, using a new "ADDRESS" in Satellite Channel Assignment file, change the "Station Name" to whatever you want.

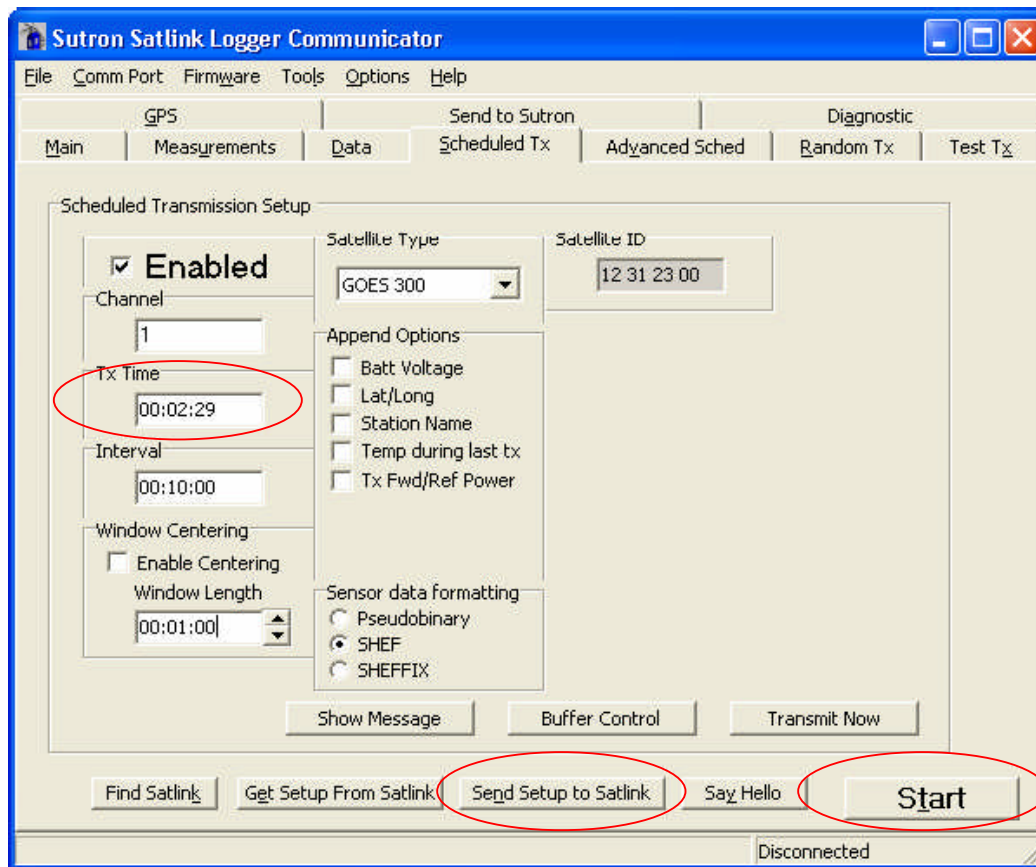




- 5) Update the “Slop” and “Offset” in “Measurement” frame, following the calculation method provided in next section.



- 6) Update the “Tx Time” in “Scheduled Tx” frame, by the “FIRST TRANS” value in Satellite Channel Assignment file according to the “ADDRESS” that is put in “Main” frame.

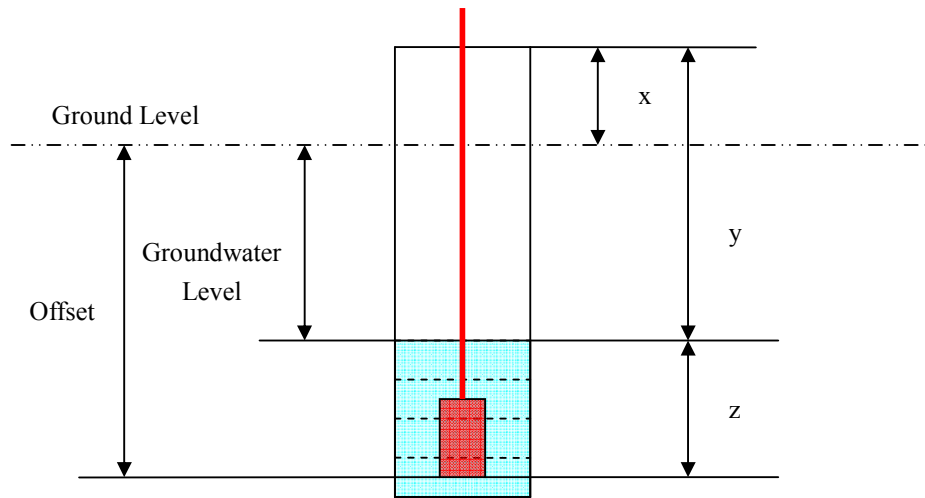


- 7) Click “Send Setup to Satlink” button to configure the Satlink with current configuration.
- 8) Make sure Satlink is started. If you can see the “Start” button at bottom, please click this button until it turns to “Stop”.
- 9) After configuration, close the Satlink Communication program and disconnect the DB-9 cable.

## For Slop and Offset Calculation in Satlink Communicator:

1Psi. (Pounds per square inch) = 2.3073 feet of water

$$\text{Slop} = \frac{\text{Psi of Sensor} * 2.3073}{\text{Voltage Range}} = \frac{15 * 2.3073}{5} = 6.92$$



We want to measure the groundwater level, where:

$$\text{Groundwater Level} = \text{Offset} - z$$

Therefore, we need to calculate the Offset, according to the following equation:

$$\text{Offset} = y + z - x$$

Where

- 1) z is the initial reading from the sensor by setting Slop = 6.92 and Offset = 0
- 2) y is the reading from the water level gauge
- 3) x is the length between the measuring point of the gauge and the ground level

Finally, we set

$$\text{Offset} = y + z - x$$

$$\text{Slop} = -6.92$$

to complete the configuration for sensor calibration.